

SCHEDULE-B

Estimate for the work of providing , laying and shifting of 100 mm dia DI Water Supply Line at Rajkumar undepass and Lingarajapura village coming under Lingarajapuram service station of AEE E-2-2 Sub Division. At chainage 4+350 to 4+600

Sl. No	Particulars	Unit	Qty
1	Dismantling of cement concrete pavement by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 m ³ in volume and stock piling at designated locations and disposal of dismantled materials and stacking serviceable and unserviceable materials separately	M ³	7.20
2	Earth work excavation for pipeline trenches in all kinds of soils by mechanical means as per drawing and technical specifications, including setting out, construction of shoring, strutting, barricading, caution lights, bracing, using sight rails & bonding rods at every 100 mm wherever necessary as directed, removal of stumps and other deleterious matter, dressing of sides and levelling the bottom of trench to the extent required , utilising the available excavated earth locally for the work etc., and all other appurtenances complete in the following strata.	M ³	36.00
3.	Providing and laying Ductile Iron pipes of class conforming to IS 8329:2000 with latest amendments, conveying to work site, rolling and lowering into trenches, laying true to line, level and perfect linking at joints, testing and commissioning, including loading and unloading at both destinations, cutting of pipes wherever necessary, jointing with DI specials (excluding cost of specials) and rubber gaskets, cleaning the socket and spigot end with soap solution, applying soft soap to the socket and spigot ends before insertion of rubber gaskets, jacking and fixing in perfect conditions etc. The cost to include soap solution, soft soap, waste etc. and giving necessary hydraulic test to the required pressure as per ISS with all lead and lifts and cost of all jointing materials. (The contractor will make his own arrangements for water for testing. Earth work excavation in trenches to be measured and paid forseperately) Note: In sewerage projects for internal cement mortal lining (CML) of DI pipes, if High Alumina Cement (HAC) as recommended in Annexure B clause 16.3 of IS8329:2000 is considered in place of Slag or Sulphate Resistance Cement (SRC), the cost of pipes may be increased by 5-6% from the prices listed. K9 pipe. 100mmdia	Rmt	45.00
4	Manufacturing, providing, trasporting, rolling, lowering, laying, jointing & testing and commissioning of MS specials of minimum 8mm thick such as bends, tail pieces, reduces etc. conforming to IS-7322:1985 with latest amendments and including perfect linking and welding of joints to correct position includng cost and conveyance of materials with all lead and lifts, cost all labour and giving satisfactory hydraulic test as per IS:3589:2001 with latest amendments for test pressure and working pressure both at factory and site etc. complete as per detailed specifications with inside lining two coat of food grade epoxy painting of approved make with Each coat of 250 micron thick (after dry) over one coat of food grade epoxy primer of approved make with minium of 50 micron thick (after dry) and outside 25mm thick coating in CM 1:3 by providing 50x50mm weld mesh including loading and unloading of the pipes for the following category to suit PSC / MS / CI / AC / DI / PVC pipes. The weight of MS shell only by considered before lining and coating for arriving at the rate. The thickness of plate will be specified by the engineer. (Contractor will make his own arrangements for procuring water for testing for: Note: 1) For small works where the C.M. lining is not practicable for inside surface of the pipe, food grade expoxy painting of two coat over one coat of epoxy primer may be proposed and got approved. 2) The above rates are applicable only for pipe works etc. complete. Pipe bends,branches, tail pieces, reducers etc. for upto 500mm dia pipes	Kg	4437.00
5	Providing, fabricating and fixing at site various diameter MS MJ ends to suit CI / DI pipe as per the sketch . The cost is inclusive of all materials, i.e, rubber 'O' rings, flanges, bolts and nuts, consumables, hire charges, tools and tackles, welding equipments, lead and lifts, etc. complete as per the instructions of Engineer in charge 450mm dia	No	2.00
6	Providing and fixing DI MJ specials such as branches and bends suitable for DI K7 and K9 pipes and CI LA class pipes, as per IS 13382 with latest amendments with complete accessories and fixing at site excluding earth work but including loading, unloading, freight charges etc. complete for:		

6a	DI MJ specials - Branch 100 x 100mm	Each	2
6b	DI MJ specials - Bend 100 x 45 degree	Each	1
6c	DI MJ specials - collar 100mm dia.	Each	4
7	Providing, fabricating and fixing at site various diameter MS MJ ends with dummy plates (END CAPS) to suit CI / DI spigots end as per the sketch. The cost is inclusive of all materials, i.e, rubber 'O' rings, flanges, bolts and nuts, dummy plates, consumables, hire charges, tools and welding equipments, lead and lifts, etc. complete as per the instructions of Engineer in charge. For CI / DI pipes of 100mm dia	Each	1
8	Providing and fixing DI Resilient seated soft sealing SLUICE VALVE of various dia. with body bonnet of Ductile Iron (DI) conforming to IS-1865 with the latest amendments and of grade GGG 40/50, shaft of stainless steel, wedge fully rubber lined with EDPM seals of NBR and the valves should be vacuum tight and 100% leak proof with face to face dimensions as per IS 14846-2000 with the latest amendments only. The stem sealing should be with toroidal sealing rings (minimum 2 " O " rings). Body and bonnet should be coated with Electrostatically applied Epoxy Powder Coating with minimum coating thickness of 250 micron both inside and outside. The rate is inclusive of cost of valves, T.P set, galvanized bolts & nuts and rubber insertions etc. but excluding earth work. For PN-10: (Note: TP set should be considered only for DI pipes estimate. For MS pipes estimates, TP sets cost of corresponding dia shall be deducted from the SR rates of valves and provision for corresponding dia MS flanges should be made in the estimate.) etc. completeFor PN-16.0		
8a	100mm dia	Each	2
8b	200mm dia	Each	1
9	Refilling available earth around trenches/pipelines, cables in layers not exceeding 20 cms in depth, compacting each deposited layer by ramming after watering with a lead upto 50 m, and lift upto 1.5 m. Including cost of all labour complete as per specifications	M ³	30.25
10	Removal of Unserviceable Soil with Disposal upto a suitable distance as directed by the Engineer incharge of work	M ³	0.353
11	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density.	M ³	7.20
12	Providing and laying in position Cement Concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machinery, curing, and all the other appurtenances required to complete the work as per technical specifications.Mix 1:3:6 Using 40 mm nominal size graded crushed coarse aggregates	M ³	5.40
13	Dewatering the sewage / storm water by using required HP submersible pump for the diversion of storm / sewage during the execution of work. Considering for one Pump 10-HP	hr	2.00
14	Excavating of ramming/jacking/driving pit and receiving pit of size 5.00m(length) x 3.00m (breadth), up to 6.00 m depth in all soil strata including shoring and strutting including cutting of Asphalt/CC/Macadam road surface and removing the excavated stuff with all lead and lifts. The work includes formation of CC/RCC of 1:3:6 with or without 20mm steel with suitable spacing. The work also to receive the impacts driving pushing operation of encasing pipe. The cost includes driving the horizontal bore by pushing/jacking methods (trenchless technology method) by using construction agencies' cranes, jacks, jacking materials, generator, welding machineries, compressor, jack hammer and other equipments etc., without interfering and causing any hindrance to the movement of traffic or any other vehicles, without any disturbances to the railway/road/canal formation etc., The cost also includes bailing /pumping of water where ever necessary without affecting any installation like water supply and sanitary pipeline/telephone cable, electric cables etc. The work comprises of water for curing, carriage and fixing charges, concrete up to plinth for erecting and conducting the hydraulic pushing arrangements part from passing through and scooping the earth inside the pipes and pit and depositing and disposing the surplus earth to a designated/ approval place and levelling the site after completion of entire work as directed by Engineer in Charge. The rate is excluding the cost of MS pipes.complete.(Size up to 5 m X 3 m - depth up to 4 m) 450mm dia	No	2.00

15	Installation of product pipe by manual jacking method - Manufacturing, providing, transporting, rolling, lowering, laying & jointing, testing, commissioning of ERW (Electric Resistance Welded), SAW (Submerged Arc Welded) MS pipe (Fe-410 grade) conforming to IS 3589-2001 with latest ammendments including perfect linking welding of joints to correct position including cost and conveyance of pipes and materials with all lead ,lift, cost of labour, loading and unloading of pipes for the following diameters with specified thickness of plate as noted below including bailing out of water wherever necessary for laying of carrier pipe of suitable dia including inside and outside of casing pipe painted with two coats of Anti corrosive tankmastic paint. Installation of steel pipe by Ramming / Jacking method to cross Railway track / NH /BDA /BBMP/ Other roads/Existing utilities / NALA crossings, filling the gap between casing pipe and carrier pipe with quarry grit using compressor with all necessary equipments, plants etc, complete. Suitable spacers of HDP/ MS or other similar material should be provided in between carrier& casing pipe to prevent carrier pipe forming metallic contact with casing pipe. Note : a. The cost of jacking is inclusive of cost M.S. casing pipe of specified thickness b. The cost of carrying pipe is separate and provision shall be made as per site requirement c. The cost of Jacking includes all leads lifts, cost of consumables, fuel charges, labour. d. The cost of jacking and receving pits shall be proposed seperately as per site requirement. Jacking of 900 mm dia & 10mm thick M.S. Casing Pipe.900mm dia	m	50.00
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Executive Engineer

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